

# case study - manhole monitors

## United Utilities

### How it started

Responsible for supplying 1.8 billion litres of water daily to more than 3 million homes and businesses across the North West of England, United Utilities needed an efficient way to manage their wastewater network. Already users of the map16 Smart Utility platform to map and manage their sewer network, providing wastewater monitors was the natural next step for the partnership.

### The solution

map16 designed, built, and distributed 3,330 EX2 wastewater monitors to United Utilities, utilising a 4G cellular connection with SMS data backup to ensure reliable installation in all required locations. These monitors were strategically placed inside manholes across both mainline and lateral sewer networks in the North West's high-risk areas. Through map16's Smart Utility platform, users can set alert thresholds, monitor specific devices in detail, gather pre-site survey information, and track installation progress, enhancing the management and monitoring of wastewater infrastructure. This deployment not only improves operational efficiency but also helps prevent sewer overflows and blockages, contributing to better environmental protection.

### The benefits

Feedback from United Utilities has shown that the implementation of the monitors throughout the network is enabling early blockage detection, significantly improving response times. There have been multiple occasions when the monitors have successfully alerted contractors to a developing blockage, allowing for timely intervention. For instance, in the provided images, a timeline graph clearly highlights a sudden change in water level, which triggered an alert for sewer cleansing. Upon arrival at the site, it was evident that FOG (fats, oils, and grease) was obstructing the sewer flow. This early warning and subsequent action prevented what could have potentially escalated into property flooding, demonstrating the effectiveness of the monitoring system in mitigating risks and maintaining sewer integrity.



Blockage in sewer shown by peak in graph



After sewer cleanse, shown by drop in graph

